CLAIMS

1. Integrated optics coupling element, characterised in that it comprises in a substrate (11, 21) an optical guide core (12, 24), an optical cladding (13, 31) independent of the core and surrounding at least one portion of the core in a substrate zone called the zone of interaction, in which the cladding has at least in the zone of interaction a modulation of its structure so as to form a coupling grating (R) between the guide core and the optical cladding, in which the refractive index of the cladding is different from the refractive index of the substrate and lower than the refractive index of the core at least in the part of the cladding next to the core in the zone of interaction.

2. Integrated optics coupling element of claim 1, characterised in that the modulation of the cladding structure is a modulation of its section

3. Integrated optics coupling element of claim 1 or 2, characterised in that the modulation of the cladding structure is a modulation of the position of the cladding with respect to the core.

4. Integrated optics coupling element of any of claims 1 to 3, characterised in that the modulation of the cladding structure is obtained by ionic implantation or ionic exchange or even localised heating.

5. Integrated optics coupling element of any of claims 1 to 4, characterised in that the grating formed by the modulation of the cladding structure is an apodised grating.

6. Integrated optics coupling element of any of claims 1 to 5, characterised in that the grating formed by the modulation of the cladding section is a chirped grating.

7. A method for fabricating an integrated optics coupling element in a substrate of claim 1, characterised in that the cladding and the guide core are respectively created by a modification of the refractive index of the substrate so that at least part of the cladding next to the core and at least in the zone of interaction, the refractive index of the cladding is different from the refractive index of the substrate and lower than the refractive index of the core and so that the cladding in the zone of interaction comprises a modulation of its structure capable of forming the grating.

8. The method of claim 7, characterised in that the modification of the refractive index of the substrate is obtained by radiation and/or by introduction of ionic species.

9. The method for fabricating a coupling element according to claim 8, characterised in that the

substrate is selected from glass, KTP, $LiNbO_3$ or even $LiTaO_3$.

10. The method for fabricating a coupling element of claim 8 or 9, characterised in that it comprises the following steps:

a) introduction of a first ionic species in the substrate so as to permit the optical cladding to be obtained after step c),

b) introduction of a second ionic species in the substrate so as to permit the guide core to be obtained after step c),

c) burying of the ions introduced in steps a) and b) so as to obtain the cladding and the guide core.

11. The method for fabricating a coupling element of claim 10, characterised in that step a) comprises the creation of a first mask comprising a pattern capable of obtaining the cladding, in which the introduction of the first ionic species is carried out through this first mask and step b) comprises the elimination of the first mask and the creation of a second mask (65) comprising a pattern capable of creating the core, in which the introduction of the second ionic species is carried out through this second mask.

12. The method for fabricating a coupling element of claim 11, characterised in that the pattern of the first mask is capable of obtaining the modulation of the cladding structure to form the grating.

13. The method for fabricating a coupling element of claim 11, characterised in that the pattern of the first mask is uniform, in which the modulation of the cladding structure is obtained by localised heating (63) of the cladding.

14. The method for fabricating a coupling element of claim 10, characterised in that characterised in that step a) comprises the creation of a mask comprising a pattern capable of obtaining the cladding and the core, the introduction of the first and the second ionic species of steps a) and b) being carried out through this mask and in which the modulation of the cladding structure is obtained by localised heating.

15. The method for fabricating a coupling element of claim 11 or 14, characterised in that the masks are made of chrome, alumina or dielectric material.

16. The method for fabricating a coupling element of any of claims 10 to 15, characterised in that the burying step comprises a deposit of at least one layer (68) of material with a refractive index lower than that of the cladding, on the surface of the substrate.

17. The method for fabricating a coupling element of any of claims 10 to 16, characterised in that the burying step is carried out with the application of an electrical field.

18. The method for fabricating a coupling element of any of claims 10 to 17, characterised in that the substrate is made of glass and contains Na^+ ions, the first and second ionic species are Ag^+ and/or K^+ ions.